

REMARKS

Claims 8-25 are pending in the application. Of those, claims 14-17 are canceled herein.

Reconsideration of the rejection of claims 8-10 under 35 U.S.C. 102(b) as being anticipated by US 6,364,282 to Ausman et al is respectfully requested.

Claim 8 is directed to a valve for controlling a connection in a high-pressure fluid system, in a fuel injection apparatus for an internal combustion engine, the valve having

a valve member guided for sliding movement in the direction of a longitudinal axis of the valve member and protruding into a valve pressure chamber in which high pressure prevails at least some of the time,

a sealing surface on the valve member in the valve pressure chamber at an end extending transversely in relation to the longitudinal axis of the valve member, the sealing surface of the valve member cooperating with

a valve seat in the valve pressure chamber and extending transversely in relation to the longitudinal axis of the valve member in order, at least to a large extent, to close an opening encompassed by the valve seat in relation to the valve pressure chamber which opening is adjoined by a connection leading to a low-pressure region, and

a pin on the valve member, the pin protruding into the connection and, when the sealing surface of the valve member is lifted away from the valve seat, this pin conveys fluid flowing out of the valve pressure chamber in such a way that the outgoing fluid exerts at least approximately no resulting force or only a slight resulting force on the valve member in the direction of the longitudinal axis, wherein

the valve seat and/or the sealing surface on the valve member is embodied so *that the distance between the sealing surface and the valve seat, starting from an outer edge of the valve member, first decreases as it extends radially inward toward the longitudinal axis of the valve member and then increases again as it continues to extend radially inward*, as

one of the valve seat or the sealing surface on the valve member is *embodied by two regions that are inclined contrary to one another and adjoin one another directly*, and the other of the valve seat or the sealing surface is *embodied as a plane and is disposed at least approximately perpendicular to the longitudinal axis of the valve member*.

The amended claim 9 now incorporates the subject matter of claim 14, and recites the crucial and distinguishing point of the invention, i.e. that one of the valve seat or the sealing surface on the valve member is embodied by two regions that are inclined contrary to one another and adjoin one another directly, and the other of the valve seat or the sealing surface is embodied as a plane and is disposed at least approximately perpendicular to the longitudinal axis of the valve member.

This can be seen from Figs. 4 and 6 and is explained in the corresponding part of the specification. The regions, inclined contrary to one another, of the sealing face and of the valve seat, respectively, form flow inlet and flow outlet regions, by which the flow through the valve is improved and cavitation is avoided.

Ausman lacks any disclosure of the subject matter of claim 14 and was not applied to reject the subject matter of claim 14. Accordingly, withdrawal of the rejection of claims 8-10 is respectfully requested.

Reconsideration of the rejection of claims 8-25 under 35 U.S.C. 102(b) as being anticipated by US 4,653,455 to Eblen is respectfully requested.

Eblen discloses a valve having a valve member 33, a valve pressure chamber 35, a sealing surface 36, a valve seat 33b, an opening encompassed by the valve seat, a connection 28a to a low-pressure region, and a pin 37 with an annular groove 33e. Contrary to the examiner's position, Applicants disagree that the annular groove extends in the direction of the longitudinal axis of the valve member, at least approximately to the level of the sealing surface of the valve member. Further Applicants disagree that the distance between the sealing surface and the valve seat, starting from the outer edge of the valve member, first decreases as it extends radially inward toward the longitudinal axis of the valve member and then increases again as it continues to extend radially inward.

The amended claim 8 now further recites, as discussed above, that one of the valve seat or the sealing surface on the valve member is embodied by two regions that are inclined contrary to one another and adjoin one another directly, and the other of the valve seat or the sealing surface is embodied as a plane and is disposed at least approximately perpendicular to the longitudinal axis of the valve member.

Clearly Eblen is deficient in disclosing or suggesting the combination and arrangement of the elements recited in claim 8 as required under 35 USC 102(b). Therefore withdrawal of the rejection is respectfully requested.

Reconsideration of the rejection of claims 8-17 under 35 U.S.C. 102(b) as being anticipated by US 2003/0057298 to Boecking is respectfully requested.

Boecking discloses a valve having a valve member 7, a valve pressure chamber 17, a sealing surface 11, a valve seat 9, a pin 30, and an annular groove 23. Boecking clearly differs from the present invention in that neither one of the sealing surface or valve seat has oppositely inclined surfaces directly adjoining, and neither one of the sealing surface or valve seat is disposed at least approximately perpendicular to the longitudinal axis of the valve member. Therefore Boecking does not anticipate the invention as required under 35 USC 102(b). Accordingly withdrawal of the rejection is respectfully requested.

Reconsideration of the rejection claims 8-13 under 35 U.S.C. 102(b) as being anticipated by US 5,127,583 to Taue is respectfully requested.

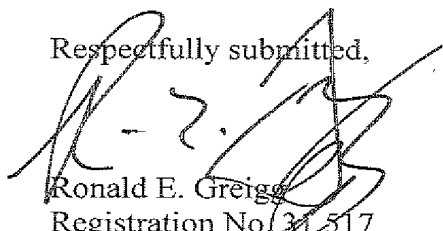
Taue discloses a valve having a valve member 49, a valve pressure chamber, a sealing surface 202, a valve seat 206, and a pin 53 with an annular groove 205. Taue clearly differs from the present invention in that neither one of the sealing surface or valve seat has oppositely inclined surfaces directly adjoining, and neither one of the sealing surface or valve seat is disposed at least approximately perpendicular to the longitudinal axis of the valve member. Therefore Taue does not anticipate the invention as required under 35 USC 102(b). Accordingly withdrawal of the rejection is respectfully requested.

None of the prior art of record appear to disclose a surface, which constitutes a valve seat and extends transversely, at least approximately perpendicularly, in relation to the longitudinal axis of the valve member, the valve member has a sealing surface that extends transversely, preferably at least approximately perpendicularly, in relation to the longitudinal axis of the valve

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member, as recited in the amended claim 8. Accordingly, reconsideration of the claims and withdrawal of the rejections is respectfully requested.

Respectfully submitted,



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